

Final Report

Increasing National Distillers Grains Marketing Opportunities

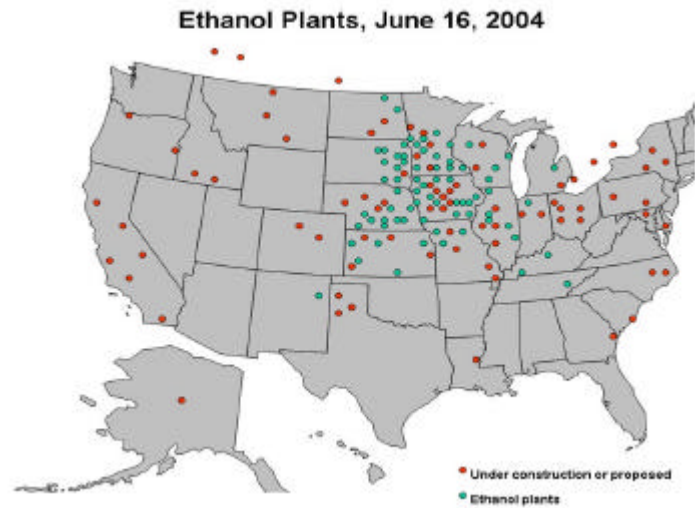
To: Agricultural Marketing Service
United States Dept. of Agriculture

From: Iowa Department of Agriculture
and Land Stewardship
Pat Paustian – 515.281.6936
phone

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from Nine Cooperating Agencies/Organizations.



OUTLINE OF PROBLEM

Increased ethanol production means more distillers grains must be sold. For every pound of ethanol produced, a pound of distillers grains is also produced. Everyone can consume ethanol, but only livestock, at present, consumes distillers grains. We need more feeders using distillers grains and feeding it at higher rates in feed rations. How are we going to make this happen?

The nation's current ethanol production capacity is 3,454 million gallons per year. Sixty-one percent (61%) of that production (2,119 million gallons per year) comes from dry-mill facilities. Dry mill plants under construction will add another 677 million gallons to the nation's annual production. Although most of a dry-mill plant's revenue is generated by ethanol sales, sales of distillers grains should typically account for 21% of each facility's revenues. Adequate sales must be generated for plant stability and profitability.

ACTIVITIES UNDERTAKEN TO APPROACH SOLUTIONS TO PROBLEM

The project's overall goal was to facilitate marketing of distillers grains locally, regionally and globally by encouraging and enabling networking and dialogue between dry mill processors, distillers grain marketers, feeders, and research experts:

- Develop national dry-mill corn processing industry database
- Perform surveys to determine status and needs of industry, and
- Conduct National Distillers Grains Marketing Conference

This project could not have happened without the in-kind support from the Team members:

- Iowa Department of Agriculture and Land Stewardship, Team lead
- Iowa Area Development Group *Iowa Cattlemen's Association *Iowa State University
- Iowa Corn Promotion Board *Iowa Farm Bureau Federation
- Iowa Institute for Cooperatives *Iowa Renewable Fuels Association

A dry-mill corn processing industry database was established and used to perform distillers grains status reports and needs assessments of United States distillers grains producers, marketers, and feeders. Results of the analysis of the distillers grains surveys and comment forms were presented at the National Distillers Grains Marketing Conference in April 2003.

Objective 1 – Create database for dry mill corn processors and major marketers/feeders of distillers grains.

- Databases were developed and are being maintained:
 - Ethanol production facilities
 - Distillers grains marketers / feed companies
 - Distillers grains research experts

Objective 2 - Develop a status and needs assessment survey for dry mill corn processors.

Dry-mill plants in the 20 states that produce ethanol were surveyed regarding the marketing of their distillers grains. The National Agricultural Statistics Service (NASS) performed this statistically valid survey which included telephone follow-up. Three separate surveys were conducted with results analyzed and summarized.

- An information sheet was included which solicited information from processors that would be posted to the www.DistillersGrains.com web site.
- Survey results were analyzed, summarized and presented at two conferences:
 - National Distillers Grains Marketing Conference in Des Moines, IA in April 2003
 - Distillers Grains Technology Council in Kentucky in May 2003.
- The survey summary is attached.

Objective 3 – Develop a status and needs assessment survey for Distillers Grains purchasers, marketers and livestock feeders.

A survey was developed regarding the purchasing, marketing, and feeding of distillers grains in at least the 20 states that process ethanol. The National Agricultural Statistics Service (NASS) performed this statically valid survey which included telephone follow-up

- Separate surveys were developed and administered to 6,600 feeders of cows, cattle-on-feed, dairy cows, hogs and turkeys in Iowa and Minnesota.
- Survey results were analyzed, summarized and presented at the conference on April 8-9, 2003.
- Survey results were also presented at the Distillers Grains Technology Council in Kentucky in May 2003.
- The survey summaries are attached.

Comments were solicited from the livestock groups regarding distillers grains.

Livestock Feeder Survey Comments	
(Comments expressed by 4 or more respondents)	
Marketing	
Cost is key factor - Too high priced - needs to be priced below corn on a dry matter basis - least cost rations - must be cost competitive	27
More info on DG (to merchants & end-users) & more "push"	19
Info on hog and turkey rations	10
Information on availability - hard to get	10
It's a good cost-effective product in custom pre-mix	5
How is price determined	4
Promote the entire industry - not niche markets	4

Product Characteristics	8
More consistent product - Major #1 issue - HAS to be consistent...ALWAYS (smell, color, particle size, quality, composition, with known value and test weight) - too many variables from plant to plant - need more consistent flow-ability and feeding characteristics -without excessive heat damage	36
Consistent size - very good product - must be consistent load to load	4
Flow-ability not good	4
Best thing since sliced bread for cattle feeders	4
Transportation	5
How lower transportation costs	9
Costs high (if wet) vs. corn shipping	5
Major bug-a-boo - needs improvement - necessary evil	4
Storage	
How handle and store - What storage needed - Bulk bin? High moisture structures w/o bridging?	14
Flow-ability in storage	10
Must be dry ration to last long time - must flow like soybean meal	8
Hot weather precautions	5
Shelf life of different products	4
Can't store hot product - or wet product	

Objective 4 – Sponsor the National Distillers Grains Marketing Conference in April 2003.

The conference was held April 7-9, 2003 at the Downtown Marriott in Des Moines, Iowa. The feed industry and the dry-mill industry greatly benefited from this national conference. Research experts and real-world processors and feeders had networking opportunities as they received the most current information on distillers grains. Summaries of all three studies were presented and the program was assembled relying on topics and speakers that were suggested in the surveys. The previously assembled database was utilized to distribute pre-conference materials. Information about the conference was posted on various web sites.

National Distillers Grains Marketing Conference April 7-9, 2003 Downtown Des Moines Marriott Des Moines, Iowa

Distillers grains marketing extends beyond state borders. Plan to attend this national conference as the industry identifies barriers and refines marketing strategies for the ever-increasing volume of distillers grains.

The trade show will start at the evening reception on April 7th and will be open throughout the next two days of the conference. Exhibitors are encouraged to attend the conference general session to hear the latest information about distillers grains and marketing issues. All meal, reception and break functions will take place in the trade show area to increase networking opportunities.



NATIONAL DISTILLERS GRAINS MARKETING CONFERENCE AGENDA

MONDAY, APRIL 7, 2003

6-8:00 p.m. Reception - Trade Show Opens
Brent Halling, **Iowa Deputy Secretary of Agriculture** will host the reception as conference attendees take this opportunity to meet with trade show exhibitors.

TUESDAY, APRIL 8, 2003

7:30 a.m. Continental Breakfast - On-Site Registration - Trade Show Opens

8:30 a.m. Welcome - Brent Halling, Iowa Deputy Secretary of Agriculture

8:45 a.m. Opening Speaker

Paul Gallagher, **Iowa State University**, also representing **USDA**, will discuss marketing issues facing the dry mill industry and distillers grains.

9:15 a.m. Results of 3 National Distillers Grains Marketing Surveys

Ethanol / distillers grains plants, marketers / feed companies, and large livestock feeders were surveyed in January 2003 to gather information the industry can use as it develops marketing strategies for distillers grains.

Jim Sands, State Statistician, **Iowa Ag Statistics/NASS** (Iowa State Office)

Pat Paustian, **Iowa Department of Agriculture and Land Stewardship**

10:00 a.m. Refreshment break in Trade Show area

10:30 a.m. Panel – Transportation

Transportation experts will address various shipping costs, limitations, and issues, including:

John Risolvato, General Director of Bulk Foods & Fertilizer, **Burlington**

Northern Sante Fe Railroad, Texas

Donald P. Morrison, Jr., **The Rice Company – Krohn Division**, Connecticut,

Barge transportation

11:50 a.m. Luncheon in Trade Show area – Marketing Speaker

1:20 p.m. Panel - Marketing Strategies

Vast quantities of distillers grains must be sold daily to ensure profitability. Companies discuss how they are working with customers to provide individual feed solutions. Businesses will share marketing issues they consider as they move product across the nation.

3:00 p.m. Refreshment break in Trade Show area

3:30 p.m. Panel – Marketing – Communicating “Value”

Cost is a key factor for distillers grains sales, but it is not the only factor. Industry experts will discuss a variety of issues on the comparative value of distillers grains.

4:45 p.m. Adjourn for day

WEDNESDAY, APRIL 9, 2003

7:30 a.m. Continental Breakfast – On-Site Registration - Trade Show Opens

8:30 a.m. Welcome - Brent Halling, Iowa Deputy Secretary of Agriculture

8:45 a.m. Panel – Expanding Opportunities

Experts discuss where they see opportunities for new products and/or new markets for distillers grains.

Charlie Staff, Executive Director/CEO, **Distillers Grains Technology Council**, Kentucky, Opportunities Expanding in USA



Jerry Shurson, **University of Minnesota**, Opportunities World-Wide

Vijay Singh, **University of Illinois**, Urbana, Quick Germ - Quick Fiber for Dry Grind Ethanol

10:00 a.m. Refreshment break in Trade Show area

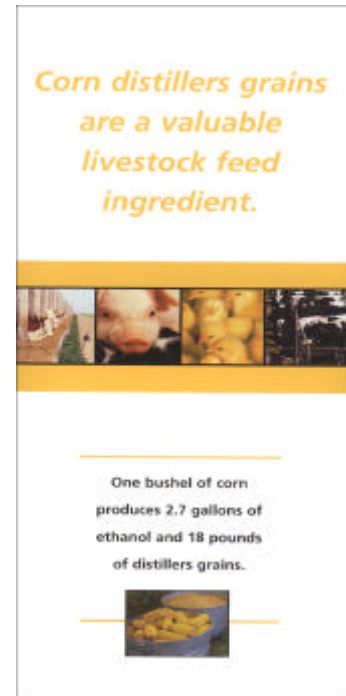
- 10:30 a.m. Panel – Livestock Feeders**
Feeders and feed companies discuss transportation, storage and feed handling Issues in their operations. Speakers will include:
Reg Clause, Iowa Beef Feedlot feeder
- 11:30 a.m. Luncheon in Trade Show area**
- 12:30 p.m. Monte Hemenover, Avenues For Change, Missouri**
Hemenover is a champion for managing change and maximizing the opportunities change presents.
- 2:00 p.m. Refreshment break with Exhibitors**
- 2:30 p.m. Panel – Product Characteristics – Standardized Product or Unique Product**
In the feeder survey, 6600 large livestock feeders were asked to provide comments regarding characteristics they require in feed products. Industry marketing experts will share their views on the value of specific product characteristics. Speakers Include:
Scott Bjornson, Ingredient Purchasing Manager, **Jennie-O Turkey Store**,
Minnesota
Kevin Gyland, **Furst-McNess Feed Company**, Nutrition and Handling Issues
- 3:50 p.m. Roundtable Discussion – Where Do We Go from Here?**
Conference speakers will be invited back to have an interactive discussion with attendees.
- 5:00 p.m. Trade Show Reception - Prize drawings at 6:15 p.m.**
This will be the last chance for attendees to visit with exhibitors and network with this growing industry.
- 6:30 p.m. Trade Show closes**
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A web site has been started (www.distillersgrains.com). Information is added to this site on a continual basis.

 <p>Iowa Department of Agriculture and Land Stewardship Office of Renewable Fuels & Co-Products</p> <h1>Distillers Grains</h1>	
	
<p><u>Ethanol Plant Directory</u></p> <p><u>Conferences & Workshops</u></p> <p><u>Dry Mill Process</u></p> <p><u>Research & Presentations</u></p> <p> <u>Beef</u></p> <p> <u>Dairy</u></p> <p> <u>Swine</u></p> <p> <u>Poultry</u></p> <p> <u>Other Species</u></p> <p> <u>General</u></p> <p><u>Distillers Grains Researchers</u></p> <p><u>Publications, Studies & Reports</u></p> <p><u>Submit Information</u></p> <p>Contact: Pat Paustian Office of Renewable Fuels and Co-Products Wallace State Office Building Des Moines, Iowa 50319 Phone: (515)281-6936 Fax: (515) 281-8503 E-mail: Pat.Paustian@idals.state.ia.us</p>	<h2>High quality livestock and poultry feed</h2> <p>In just over two decades, U.S. ethanol production capacity has risen from virtually zero to over 3 billion gallons a year. Dry mill processing plants produce approximately 61% of the nation's ethanol today; the rest is processed in wet mill facilities.</p> <p>Increased demand has led to several major expansions of existing ethanol production facilities in the last few years. Growth in America's ethanol industry has also been as a result of many farmer-owned organizations building ethanol plants. Since all of the new plants are dry mill facilities, the volume of distillers grains, a co-product of ethanol production, is also increasing.</p> <p>When ethanol is produced from corn only the starch is used. A variety of highly valuable feed co-products are produced from the remaining protein, fiber, vitamins and minerals in dry mill corn processing.</p> <p>One bushel of corn produces 18 pounds (2.72 gallons) of ethanol and approximately 17 pounds of distillers grains in various forms:</p> <ul style="list-style-type: none"> *Distillers Dried Solubles (DDS) *Distillers Dried Grains (DDG) *Condensed Distillers Solubles (CDS) *Distillers Wet Grains (DWG) *Distillers Dried Grains with Solubles (DDGS)

Objective 5 – Follow Up Activities

- www.DistillersGrains.com - Information is provided to visitors of the web site.
- **2003 Conference presentations** have been posted on www.distillersgrains.com.
- **Survey Dry-Mill Processing Plants in 2004** – There were sufficient funds remaining from the FSMIP grant to conduct a Year-Two survey of the dry-mill plants. The summary from that survey is attached and a PowerPoint presentation is also attached which includes projections of sales and tonnage of distillers grains produced in 2003.
- **Databases** are continually updated.
- **Distillers Grains Marketing Brochure** – Funds from the FSMIP grant were used to print 5,000 tri-fold brochures that contain 5 separate flyer informational cards on beef cattle, dairy beef, dairy, swine and poultry rations.



Distillers grains are a co-product of the dry mill process used to make ethanol from corn.

The majority of distillers grains are blended with the solubles (syrup) and dried to produce distillers dried grain with solubles (DDGS). This is done to increase their shelf-life and improve their ability to be transported.

Many "new generation" ethanol plants are farmer-owned and utilize new technology with improved quality-control procedures to create higher-quality, more nutritional DDGS. During this process, corn kernels are ground and starch molecules are converted into sugar and fermented into ethanol. All of the remaining nutrients in the corn, such as protein, fat, minerals, and vitamins, are concentrated by a factor of 2 to 3 times.

In addition to DDGS, some ethanol plants market wet distillers grains (WDG) and condensed distillers solubles (also known as syrup) to local cattle feeders. These wet co-products are excellent additions to beef and dairy cattle rations. If a plant has markets within 100 miles, customers can use WDG at an economical price because it reduces drying costs at the plant.



Adding DG can often significantly reduce feed costs while providing excellent performance. This depends on the price of competing ingredients (corn, soybean meal, and dicalcium phosphate).

Distillers grains are high in protein, fat, and available phosphorus. The high protein content and fiber present in DG make it particularly attractive for use in cattle and dairy rations, whereas the high available phosphorus content allows swine and poultry producers to reduce manure phosphorus content by feeding DG diets. (See the inserts for species-specific information.)

The Advantages of Using Corn Distillers Grains with Solubles in Finishing Beef Cattle Diets

The Advantages of Using Corn Distiller's Dried Grains with Solubles in Dairy Beef Diets

The Advantages of Using Corn Distiller's Dried Grains with Solubles in Swine Diets

• Corn Distiller's Dried Grains with Solubles is an

The Advantages of Using Corn Distiller's Dried Grains with Solubles in Poultry Diets

The Advantages of Using Corn Distillers Grains with Solubles in Dairy Diets

The Advantages of Using Dry Distillers Grains with Solubles in Sheep Rations



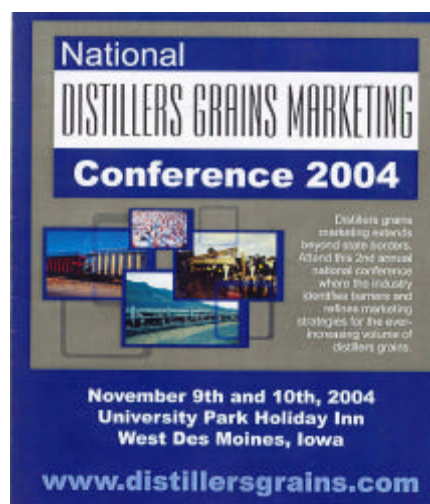
Iowa Agriculture Innovation Center

- **Regional Distillers Grains Workshops** – A series of 6 distillers grains workshops were held in Iowa to provide the latest in species-specific research results to beef, dairy, dairy-beef and swine rations. The Iowa Department of Agriculture and Land Stewardship was a sponsor of the sessions along with several other organizations. The Iowa Corn Promotion Board organized the events.
- **Iowa Regional Distillers Grains Workshop** – The Iowa Department of Agriculture and Land Stewardship co-sponsored a one-day workshop with the National Corn Growers Association in Des Moines. Industry and university experts spoke about research projects and feeding trials for distillers grains. Cooperative efforts such as this help disseminate information while conserving resources.
- **National Distillers Grains Marketing Conference 2004** - Many comments were received during the conference and at Kentucky's distillers grains conference that we should continue to sponsor a national conference. Permission was received from USDA to use registration receipts received from the 2003 conference to help sponsor a conference in 2004.

National Distillers Grains Marketing Conference
November 9th and 10th, 2004
University Park Holiday Inn (I-35/I80 and University)
West Des Moines, Iowa

Distillers grains marketing extends beyond state borders. Plan to attend this 2nd annual national conference as the industry identifies barriers and refines marketing strategies for the ever-increasing volume of distillers grains.

The conference will start Tuesday evening with the trade show opening at 4:00 with a reception. Dinner will be served at 6:00 and will feature nationally renowned speaker, Monte Hemenover of Avenues for Change.



Schedule of Events

TUESDAY, NOVEMBER 9, 2004

- 4:00 p.m.** **Trade Show Opens with Reception**
Conference attendees take this opportunity to meet with trade show exhibitors.
- 6:00 p.m.** **Dinner**
Monte Hemenover, Avenues for Change, St. Louis, MO
Monte works with dairy and cattle feeders across the nation. He will share his views on what the future holds.

WEDNESDAY, NOVEMBER 10, 2004

- 7:30 a.m.** **Continental Breakfast - On-Site Registration - Trade Show Opens**
- 8:30 a.m.** **Welcome**

- 8:45 a.m. Recent Research**
University professors will provide attendees with updates on distillers grains technology and research activities.
Vijay Singh, University of Illinois, Urbana
Jerry Shurson, University of Minnesota
- 10:00 a.m. Refreshment Break with Trade Show Exhibitors**
- 10:30 a.m. Marketing and Supply**
Vast quantities of distillers grains must be sold daily to ensure profitability. Companies discuss how they are working with customers to provide individual feed solutions. Businesses will share marketing issues they consider as they move product across the nation. Steve Markham, Commodity Specialists Company, Minneapolis, MN
National Corn Growers Association, Jefferson, MO
- 12:00 Luncheon**
- 12:30 Monte Hemenover, Avenues For Change, Missouri**
Hemenover is a champion for managing change and maximizing the opportunities change presents.
- 2:00 p.m. Communicating Value Discussion**
Cost is a key factor for distillers grains sales, but it is not the only factor. An industry expert will discuss a variety of issues on the comparative value of distillers grains.
Dr. Harold Tilstra, Nutritional Co-products Technical Support, Land O' Lakes Feeds.
- 2:45 p.m. Refreshment break in Trade Show area**
- 3:00 p.m. Livestock Feeder Views**
A panel of feeders will discuss transportation, storage and feed handling Issues regarding distillers grains in their operations.
- 4:00 p.m. Expanding Opportunities**
There will be a brief discussion on the 2004 National Distillers Grains Producers Survey with comparisons to the 2003 survey. A question and answer session with a panel of industry experts as they discuss where they see opportunities for new products and/or new markets for distillers grains. They will share their views on the value of specific product characteristics, distillers grains standards, etc.
- 5:00 p.m. Trade Show closes**

TRADE SHOW - The trade show will start with a reception and dinner starting at 4:00 on the 9th and end at 5:00 on the 10th. Exhibitors are encouraged to attend the conference general sessions to hear the latest information about distillers grains and marketing issues. Limited space is available for the Distillers Grains Trade Show.

RESULTS, CONCLUSIONS AND LESSONS LEARNED

“Distillers grains” is a big issue. **Plants must be able to sell their distillers grains, not just dispose of them.**

- Markets and marketing strategies for distillers grains must be developed and expanded.
- We must intensify efforts to survey the industry and track its activities.
- We must address the barriers that present challenges to the industry.
- We must expand the customer-base and feed usage.
- Educational materials must be developed to share the latest research information with the end-user, on a nationwide, consistent, unbiased format.

Survey Industry

Whenever results from the distillers grains surveys were presented, there was much interest and many comments. **Industry wants to know what is happening, yet it was difficult to get a completely accurate picture without a 100% response rate from the dry-mill processing plants.** Yet, response rates were phenomenal compared with response rates from most surveys. The plants responding (52% of capacity in 2003 surveys and 37% of capacity in 2004 surveys) provided much information about types and quantities of distillers grains produced, moisture, transportation and pricing.

Survey Livestock Feeders

The nation's livestock feeders must be surveyed. **Different surveys should be administered to target feeders in states with the largest concentrations of specific species.** The National Agricultural Statistics Services is able to survey those feeders economically, efficiently and confidentially. The survey would serve two purposes: 1) gather information from feeders who are/or should feed distillers grains and 2) by asking about distillers grains usage, it may help them consider it as a feeding option.

Livestock Feeder Educational Materials

Surveys sent to livestock (beef cow, cattle on feed, dairy, hog and turkey) feeders in Iowa and Minnesota showed that 27% of the respondents have fed distillers grains. Many of the feeders provided comments, both favorable and negative, along with responses to questions. Much education needs to take place as the volume of distillers grains grows. Those of us who work in this arena know the benefits of feeding distillers grains but there is a enormous group of feeders who have never heard anything about the feed, don't know how or where to purchase it, and don't know how to feed it. **A massive effort must be made to educate feeders. Industry experts need to work together to develop educational materials that can be used nationwide. The marketing materials need to be informational and consistent so that all ethanol plants and marketers are working from the same materials.** Each company could add flyers with information about their plant to give to customers.

National Distillers Grains Marketing Conference

The second annual conference will be held November 9-10, 2004. Funds from the first marketing conference's registrations were used to help offset costs of the second conference. **Information shared and networking that takes place at the conference increases marketing efforts.** This project will be continued, if possible.

www.DistillersGrains.com

The web site was started immediately upon receiving the FSMIP grant. **It provides information for industry, especially plant contact information, and receives upwards of 3,000 hits per week.** Much more information could be included on this site if sufficient time and funds were available.

CALL FOR ACTION -- Distillers grains promotions and education must be enhanced and greatly expanded to match the increased levels of distillers grains that are being produced. It is an excellent product and more livestock feeders must be educated about its benefits and encouraged to make it a vital and substantial part of their feeding rations. USDA funds are needed to coordinate this effort to ensure a continuous renewable energy industry in the USA.